

a channel formation region provided between said source region and said drain region and provided in a crystalline semiconductor comprising silicon;

wherein said channel formation region comprises an element selected from group IV elements other than silicon, and

wherein said source region, said drain region and said channel formation region are arranged in parallel with a plane,

wherein said channel formation region comprises a plurality of crystal grains provided in said crystalline semiconductor, and

wherein said plurality of crystal grains are in parallel with said plane in parallel with which said source region, said drain region and said channel formation region are arranged.

4. (Amended) A semiconductor device comprising:

a source region and a drain region;

92 a channel formation region provided between said source region and said drain region and provided in a crystalline semiconductor comprising silicon;

wherein said channel formation region comprises an element selected from group IV elements other than silicon, and

wherein said source region, said drain region and said channel formation region are arranged in parallel with a plane;

wherein said channel formation region comprises a plurality of crystal grains provided in said crystalline semiconductor,

wherein said plurality of crystal grains are in parallel with said plane in parallel with which said source region, said drain region and said channel formation region are arranged, and

wherein concentration of said element in said channel formation region is  $5 \times 10^{19}$  atoms/cm<sup>3</sup> or less.

5. (Amended) A semiconductor device comprising:

a source region and a drain region;

a channel formation region provided between said source region and said drain region and provided in a crystalline semiconductor comprising silicon;

wherein said channel formation region comprises an element selected from group IV elements other than silicon,

wherein said channel formation region comprises a plurality of crystal grains provided in said crystalline semiconductor and extending in a direction connecting said source region and said drain region, and

wherein concentration of said element in said channel formation region is  $5 \times 10^{19}$  atoms/cm<sup>3</sup> or less.

6. (Amended) A semiconductor device comprising:

a source region and a drain region;

DI a channel formation region provided between said source region and said drain region and provided in a crystalline semiconductor comprising silicon;

wherein said channel formation region comprises an element selected from group IV elements other than silicon,

wherein said channel formation region comprises a plurality of crystal grains provided in said crystalline semiconductor and extending in a same direction,

wherein an intersecting angle between said same direction and a direction connecting said source region and said drain region is adjusted in order to control resistance against movement of carriers in said channel formation region, and

wherein concentration of said element in said channel formation region is  $5 \times 10^{19}$  atoms/cm<sup>3</sup> or less.

7. (Amended) A semiconductor device comprising:

a source region and a drain region;

a channel formation region provided between said source region and said drain region and provided in a crystalline semiconductor comprising silicon;

wherein said channel formation region comprises an element selected from group IV elements other than silicon,

wherein said channel formation region comprises a plurality of crystal grains provided in said crystalline semiconductor and extending in a same direction,

wherein an intersecting angle between said same direction and a direction connecting said source region and said drain region is adjusted in order to control a rate at which carriers traverse grain boundaries in said channel formation region, and

wherein concentration of said element in said channel formation region is  $5 \times 10^{19}$  atoms/cm<sup>3</sup> or less.

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